Exploring the Extreme			
2003 Mathematics			
Course of Study			
Alabama Mathematics			
Grade K			
Activity/Lesson	**State**	**Standards**	
Finding the Center of Gravity Using Rulers	AL	MA.K.10.1	Complete data displays such as single-loop Venn diagrams and yes/no charts using real objects, concrete representations, or pictorial representations Responding to questions for the purpose of data collection
Changing the Center of Gravity Using Moment Arms	AL	MA.K.10.1	Complete data displays such as single-loop Venn diagrams and yes/no charts using real objects, concrete representations, or pictorial representations Responding to questions for the purpose of data collection
Exploring the Extreme			
2003 Mathematics			
Course of Study			
Alabama Mathematics			
Grade 2			
Activity/Lesson	**State**	**Standards**	
Finding the Center of Gravity Using Rulers	AL	MA.2.10.2	Using appropriate tools, including rulers, yard sticks, meter sticks, or tape measures
Finding the Center of Gravity Using Plumb Lines	AL	MA.2.10.2	Using appropriate tools, including rulers, yard sticks, meter sticks, or tape measures
Changing the Center of Gravity Using Moment Arms	AL	MA.2.10.2	Using appropriate tools, including rulers, yard sticks, meter sticks, or tape measures
Exploring the Extreme			
2003 Mathematics			
Course of Study			
Alabama Mathematics			
Grade 4			
Activity/Lesson	**State**	**Standards**	
Finding the Center of Gravity Using Rulers	AL	MA.4.15.2	Creating tally charts to represent data collected from real-life situations
Changing the Center of Gravity Using Moment Arms	AL	MA.4.15.2	Creating tally charts to represent data collected from real-life situations
Changing the Center of Gravity Using Moment Arms	AL	MA.4.17	Represent numerical data using tables and graphs, including bar graphs and line graphs.
Exploring the Extreme			
2003 Mathematics			
Course of Study			

Alabama Mathematics			
Grade 5			
Activity/Lesson	**State**	**Standards**	
Vectoring	AL	MA.5.8.4	Predicting the results of a flip (reflection), turn (rotation), or slide (translation)
Center of Gravity, Pitch, Yaw	AL	MA.5.1.1	Relating percents to parts out of 100 by using equivalent fractions and decimals
Center of Gravity, Pitch, Yaw	AL	MA.5.2.1	Estimating products and quotients
Center of Gravity, Pitch, Yaw	AL	MA.5.4.4	Estimating sums and differences of fractions
Center of Gravity, Pitch, Yaw	AL	MA.5.11	Estimate perimeter and area of irregular shapes using unit squares and grid paper.
Fuel Efficiency	AL	MA.5.2.1	Estimating products and quotients
Fuel Efficiency	AL	MA.5.4.4	Estimating sums and differences of fractions
Fuel Efficiency	AL	MA.5.11	Estimate perimeter and area of irregular shapes using unit squares and grid paper.
Exploring the Extreme			
2003 Mathematics			
Course of Study			
Alabama Mathematics			
Grade 6			
Activity/Lesson	**State**	**Standards**	
Vectoring	AL	MA.6.6.2	Measuring angles
Center of Gravity, Pitch, Yaw	AL	MA.6.1.1	Comparing rational numbers written as fractions, decimals, mixed numbers, and percents
Center of Gravity, Pitch, Yaw	AL	MA.6.2.1	Estimating with fractions and decimals
Center of Gravity, Pitch, Yaw	AL	MA.6.6.1	Estimating angle measures using 45 degrees, 90 degrees, 180 degrees, 270 degrees, or 360 degrees as referents
Fuel Efficiency	AL	MA.6.2.1	Estimating with fractions and decimals
Fuel Efficiency	AL	MA.6.10	Interpret information from bar graphs, line graphs, and circle graphs.
Exploring the Extreme			
2003 Mathematics			
Course of Study			
Alabama Mathematics			
Grade 7			
Activity/Lesson	**State**	**Standards**	
Jet Propulsion	AL	MA.7.5.1	Exhibiting understanding of a variable as an unknown quantity
Jet Propulsion	AL	MA.7.6.1	Solving inequalities in one variable
Vectoring	AL	MA.7.5.1	Exhibiting understanding of a variable as an unknown quantity
Vectoring	AL	MA.7.6.1	Solving inequalities in one variable
Center of Gravity, Pitch, Yaw	AL	MA.7.9.1	Estimating circumference, diameter, and area

Fuel Efficiency	AL	MA.7.4.1	Recognizing the relationships between numerical patterns in tables and their respective graphs in the coordinate plane
Fuel Efficiency	AL	MA.7.5.1	Exhibiting understanding of a variable as an unknown quantity
Fuel Efficiency	AL	MA.7.6.1	Solving inequalities in one variable
Exploring the Extreme			
2003 Mathematics			
Course of Study			
Alabama Mathematics			
Grade 8			
Activity/Lesson	**State**	**Standards**	
Jet Propulsion	AL	MA.8.4.3	Exhibiting conceptual understanding of various uses of variables
Jet Propulsion	AL	MA.8.5.3	Classifying variables in a function as independent or dependent
Vectoring	AL	MA.8.4.3	Exhibiting conceptual understanding of various uses of variables
Vectoring	AL	MA.8.5.3	Classifying variables in a function as independent or dependent
Vectoring	AL	MA.8.9	Determine the measures of special angle pairs, including adjacent, vertical, supplementary, and complementary angles, and angles formed by parallel lines cut by a transversal.
Vectoring	AL	MA.8.13.2	Making predictions by estimating the line of best fit from a scatterplot
Center of Gravity, Pitch, Yaw	AL	MA.8.11.1	Estimating surface area and volume of solid figures
Fuel Efficiency	AL	MA.8.3.1	Applying the substitution principle
Fuel Efficiency	AL	MA.8.4.3	Exhibiting conceptual understanding of various uses of variables
Fuel Efficiency	AL	MA.8.11.1	Estimating surface area and volume of solid figures
Fuel Efficiency	AL	MA.8.13.1	Representing the data with the most appropriate graph, including box-and-whisker plot, circle graph, and scatterplot